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NORTHERN DISTRICT OF CALIFORNIA

VENUE: SAN JOSE

UNITED STATES OF AMERICA.

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UNDER SEAL

UNITED MICROELECTRANCS CORPORATIONN, et al.,

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DEFENDANT(\$S.).

## INDICTMENT

VIOLATIONS:

Title 18. United States Code, Section 1831(a)(5) - Conspiracy to Commit Economic Espionage; Title 18. United States Code. Section 1832(a)(5) - Conspiracy to Commit Theft of Trade Secrets: Title 18, United States Code, Section 1/831(a)(1) - Economic Espianage (Theft of Trade Secrets); Title 18, United States Code, Section 1831(a)(2) - Economic Espionage (Copying and Conveying of Stolen Trade Secrets); Title 18, United States Code, Section 1831((a)(3) and (2) - Economic Espionage (Receipt and Possession of Stollen Thadle Secrets); Title 18 United States Code, Section 1832(A)(I) - Theft of Trade Secrets; Title 18, United States Code, Section 2323 - Criminal Forfeiture

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**ALEX G. TSE (CABN 152348)** United States Attorney 2 UNITED CENT 3 FILED 4 SEP 27 2018 5 SUSAN Y. SOONG 6 CLERK, U.S. DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA 7 UNITED STATES DISTRICT COURT 8 NORTHERN DISTRICT OF CALIFORNIA 9 SAN JOSE DIVISION 10 465 LHK 11 UNITED STATES OF AMERICA, 12 **VIOLATIONS:** Plaintiff, Title 18, United States Code, Section 1831(a)(5) 13 Conspiracy to Commit Economic Espionage; ٧. Title 18, United States Code, Section 1832(a)(5) -14 Conspiracy to Commit Theft of Trade Secrets; UNITED MICROELECTONICS Title 18, United States Code, Section 1831(a)(1) -CORPORATION; FUJIAN JINHUA 15 Economic Espionage (Theft of Trade Secrets); INTEGRATED CIRCUIT, CO., LTD.; CHEN Title 18, United States Code, Section 1831(a)(2) -ZHENGKUN, a.k.a. STEPHEN CHEN; HE Economic Espionage (Copying and Conveying of JIANTING, a.k.a. J.T. HO; and WANG Stolen Trade Secrets); YUNGMING, a.k.a. KENNY WANG. 17 Title 18, United States Code, Section 1831(a)(3) and (2) - Economic Espionage (Receipt and Possession of 18 Defendants. Stolen Trade Secrets): Title 18 United States Code, Section 1832(a)(1) -19 Theft of Trade Secrets; Title 18, United States Code, Section 2323 -20 Criminal Forfeiture 21 SAN JOSE VENUE 22 23 INDICTMENT 24 The Grand Jury charges: INTRODUCTORY ALLEGATIONS 25 Dynamic random-access memory (DRAM) is a memory device product used in 26 ١. electronics to store information. DRAM stores each bit of data in a separate tiny capacitor within an 27 integrated circuit. DRAM is a technologically advanced commodity; it is widely used in digital 28

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 computing, consumer, networking, automotive, industrial, embedded, and mobile productions, and is a product that is used or intended for use in interstate or foreign commerce.

electronics where low-cost and high-capacity memory is required. DRAM is used in leading-edge

- 2. Growth of the electronics industry in the People's Republic of China (PRC) created significant demand for memory products such as DRAM. The Central Government and State Council of the PRC publicly identified the development of DRAM technology as a national economic priority because PRC companies had not been able to develop technologically advanced DRAM production capabilities, and PRC electronics manufacturers relied on producers outside the PRC to supply DRAM. DRAM production technology was closely held by manufacturers in the United States, South Korea, and Taiwan, including Micron Technology, Inc. ("Micron"), which had improved the technology through intensive research and development over many years.
- 3. Aware of the PRC's national priority and the barriers placed by non-PRC manufacturers, including Micron, on access to the technology, at the times set forth below, individuals and companies named in this Indictment obtained DRAM trade secrets belonging to Micron and conveyed information containing those trade secrets to a company controlled by the PRC government without authorization from Micron.

#### Defendants

- 4. Defendant United Microelectronics Corporation ("UMC") was a semiconductor foundry company headquartered in Taiwan with global offices in Taiwan, China, Europe, Singapore, Japan, Korea, and the United States, including in Sunnyvale, California. UMC was publicly listed and traded on the NASDAQ. UMC's primary business was to mass produce integrated-circuit logic products based on designs and technology developed and provided by its customers. UMC did not, prior to the events charged in this Indictment, possess advanced DRAM-related technology.
- 5. Defendant Fujian Jinhua Integrated Circuit, Co., Ltd. ("Jinhua") was established in February 2016 in the Fujian Province of China for the sole purpose of designing, developing, and manufacturing DRAM. Jinhua was created with US\$5.65 billion in funding provided by the PRC government and PRC government entities. Its two major shareholders were Electronics & Information Group Co., Ltd. and Jinjiang Energy Investment Co., Ltd., which were PRC state-owned enterprises.

Jinhua's self-described aim was "to introduce intellects, technology, and resources from Taiwan and the world, create the first self-dependent DRAM production project and 12 inch DRAM wafer line in China and fill the blank." Jinhua described itself as having the "duty to realize the domestic manufacturing of [integrated circuit] chip and aims to become a state owned [integrated circuit] manufacturing enterprise with advanced process and [an] independent intellectual property system."

- 6. In or around January 2016, UMC entered into a technology cooperation agreement with Jinhua to develop DRAM technology for a product that UMC referred to as the "32nm and 32Snm DRAM" or "F32nm/F32Snm DRAM." Under the technology cooperation agreement, UMC would provide the DRAM research and development, and Jinhua would provide the manufacturing and fabrication facilities to mass-produce DRAM. UMC and Jinhua were to jointly own the DRAM technology and development. Under the terms of the agreement, Jinhua would provide US\$300 million for purchasing necessary equipment for DRAM development and would pay US\$400 million to UMC based on the progress of DRAM development. In or around April 2016, Taiwan's Ministry of Economics approved the UMC and Jinhua technology cooperation agreement.
- 7. Defendant Chen Zhengkun (a.k.a. Stephen Chen) was a Taiwanese national and former General Manager and Chairman of Rexchip Electronics Corporation ("Rexchip"), a company that Micron acquired in or around 2013, which formed Micron Memory Taiwan Co., Ltd. ("MMT"), Micron's Taiwan subsidiary. Chen became the President of MMT and Site Director of MMT's Fabrication Facility 16, responsible for making Micron's 25nm DRAM chip. Chen resigned from MMT in July 2015 and began working for UMC as the Senior Vice President and Fabrication Director in Taiwan in September 2015. In or around January 2016, Chen helped negotiate the terms of the UMC/Jinhua technology cooperation agreement and became the Senior Vice President of UMC's newly formed New Business Development ("NBD") division, tasked with overseeing UMC's F32nm DRAM development project and the technology cooperation agreement between UMC and Jinhua. In or around February 2017, UMC released Chen from his position at UMC, and Chen became the President of Jinhua in charge of its DRAM production facility.
- 8. Defendant He Jianting (a.k.a. J.T. Ho) was a Taiwanese national and former process integration manager at MMT, whom Chen recruited to join UMC. Ho resigned from MMT in or around

October 2015 and began working at UMC in its process integration division in November 2015. Prior to leaving MMT, Ho stole Micron confidential and proprietary materials and used the stolen materials in his work at UMC to advance the development of UMC's F32 DRAM technology design for transfer to Jinhua. In April 2016, Ho became a project integration manager in UMC NBD's Project Management 2 Department. Between about December 2015 and January 2017, Ho communicated with another former MMT employee, Wang Yungming (a.k.a. Kenny Wang), using the LINE Messaging platform and personal emails, to share and exchange confidential and proprietary Micron information to further UMC's F32nm DRAM technology design.

9. Defendant Kenny Wang was a Taiwanese national and former MMT employee, whom Chen hired to join UMC. At MMT, Wang was a Process Integration/Device Section Manager and remained in that role until his promotion to Product Quality Integration Section Manager in January 2016 and resignation from MMT in April 2016. While at MMT, Wang shared and exchanged confidential and proprietary Micron information with Ho, who at the time was working at UMC. Prior to his official exit from MMT, Wang misappropriated over 900 Micron files, some containing Micron confidential and proprietary information for the design of the company's DRAM technology in its current and future generations that were still in its research and development phase. Wang downloaded trade secrets from Micron's company servers in the United States, took them with him when he left the company, and stored the files on his Google Drive account located on servers in the United States. After Wang left MMT in April 2016 and began working at UMC immediately thereafter, he used the misappropriated confidential and proprietary Micron materials to further UMC's design of the F32nm DRAM design process.

## Micron Trade Secrets and Confidentiality Provisions

10. Micron is the only United States-based company that manufactures DRAM. Micron's headquarters were in Boise, Idaho, and it maintained a large office in the Northern District of California. The company became a major participant in the global semiconductor industry with its purchase of Texas Instruments' DRAM memory business in 1998 and thereafter specialized in the advanced research and development and manufacturing of memory products including, but not limited to, DRAM. Micron provides approximately 20-25% of the world supply of DRAM. The trade secrets identified

below consisted of detailed, confidential information used to design and construct efficient manufacturing processes for advanced DRAM technology. The development of this information and its confidentiality provides Micron with a significant competitive advantage in the world market. This competitive advantage allows Micron to remain in business and continue to research and develop advanced DRAM for commercial and other uses.

- 11. MMT was a subsidiary of Micron. MMT was one of Micron's fabrication plants in Taiwan that engaged in making DRAM. MMT assigned all intellectual property, including all trade secrets that it developed, to Micron.
- 12. Micron's DRAM technology included, but was not limited to, the following trade secrets, as defined in 18 U.S.C. § 1839(3):
- a. Trade Secret 1: The Micron process to manufacture and produce DRAM contained in the totality of information stolen by Wang and Ho from Micron and provided to UMC and Jinhua under the direction of Chen and others. Trade Secret 1 included ways and means in which proprietary and non-proprietary components were compiled and combined by Micron to form substantial portions of the DRAM design and manufacturing process, including Trade Secrets 2 through 8, below.
- b. Trade Secret 2: A 233-page PDF document identified with digital filename "FAB16 90s Traveler-20150518" (hereafter "25nm Process Traveler document"). The 25nm Process Traveler document contained comprehensive and very detailed information documenting the beginning-to-end manufacturing process for Micron's 25nm DRAM product, including details of specifications and production processes.
- c. Trade Secret 3: An Excel spreadsheet with multiple tabs identified with digital filename "(ALL) IMP conditions Table\_20150318" (hereinafter "Implant Conditions Table"). The Implant Conditions Table contained implant data required to make each of the various different transistor types required to make a 25nm DRAM product. Data in the Implant Conditions Table included very specific details of the relevant particular process code which could be matched back to process descriptions in Trade Secret 2.
- d. Trade Secret 4: An Excel spreadsheet with multiple tabs identified with digital filename "Implant Condition for MES setting\_1015" (hereafter "Implant Conditions for MES

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document"). MES referred to a particular software used to track the 25nm DRAM product through the fabrication process, and the Implant Conditions for MES document was a tracking document that informed the software. The document inputted into the MES software enabled Micron to closely monitor and manage its 25nm DRAM fabrication process. The Implant Conditions for MES document provided critical details to manage the fabrication of the 25nm DRAM product through the fabrication process and provided information on the precision and outcome of each particular step.

- e. Trade Secret 5: An Excel spreadsheet with multiple tabs identified with digital filename "[DR25nmS] Design rules Periphery\_EES\_2012000026-013\_Rev.13" (hereafter "Design Rules document"). The Design Rules document contained detailed design specifications for the architecture of the 25nm DRAM product, including details on how to layer Micron's 25nm DRAM product. The Design Rules document included precise information on how to build distances between elements in a DRAM product to avoid electrical and physical interference. The Design Rules document included Micron trade secrets related to these types of specifications, which were critical information needed to build a 25nm DRAM product.
- f. Trade Secret 6: A 302-page PDF document identified with digital filename "DRAM\_100\_series\_(20nm)\_traveler\_(v00h) 150730" (hereafter "20nm Process Traveler document"). The 20nm Process Traveler document contained the specific types of details summarized in the 25nm Process Traveler document but for the next generation 20nm DRAM product. The 20nm Process Traveler document also contained details regarding Micron's upgrade from the 25nm to the 20nm DRAM product and contained trade secret information pertinent to both generations of the product.
- g. Trade Secret 7: A 360 page PDF identified with digital filename "dram\_110\_series\_(1xnm)\_ traveler\_(z11a)-20150915.pdf" (hereafter "1xnm Process Traveler document"). The 1xnm Process Traveler document contained the comprehensive and very detailed information documenting the beginning-to-end manufacturing process for Micron's 1xnm DRAM product, including details of specifications and production processes. The 1xnm DRAM product was Micron's most advanced DRAM at the time. The 1xnm Process Traveler document also contained details regarding Micron's upgrade from the 20nm DRAM product to the 1xnm DRAM product and contained trade secret information pertinent to both generations of the product.

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Trade Secret 8: A 260 page PDF identified with digital filename "dram 1xnm process (Z11AA41200) - summary\_flow\_document" (hereafter "1xm Process Summary Flow document"). The 1xnm Process Summary Flow document contained the manufacturing process of the 1xn DRAM chip as it flowed through the manufacturing facility. It compared the 1xnm process flow with prior generations of DRAM products. It described the evolution of the DRAM product to the 1xnm

generation, explaining the purpose and reasons why certain changes and upgrades were made from one

13. Micron took reasonable measures to keep Trade Secrets 1 through 8 secret, including physical, electronic, legal, and policy measures.

- The information contained in Trade Secrets 1 through 8 derived independent economic 14. value, actual and potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who could obtain economic value from the disclosure or use of the information.
- The value of Trade Secrets 1 through 8, and each of them, to UMC and Jinhua, was at 15. least \$400 million and up to \$8.75 billion, including expenses for research and design and other costs of reproducing the trade secrets that UMC and Jinhua avoided by the actions alleged in Counts 1, 2, and

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<u>COUNT ONE</u>: (18 U.S.C. § 1831(a)(5) – Conspiracy to Commit Economic Espionage)

- 16. The allegations contained in Paragraphs 1 through 15 are re-alleged.
- Beginning in or about January 2016, and continuing to the date of this Indictment, in the
   Northern District of California and elsewhere, defendants,

UNITED MICROELECTONICS CORPORATION, FUJIAN JINHUA INTEGRATED CIRCUIT, CO., LTD., CHEN ZHENGKUN, a.k.a. STEPHEN CHEN, HE JIANTING, a.k.a. J.T. HO, WANG YUNGMING, and a.k.a. KENNY WANG,

together with others known and unknown to the Grand Jury, knowingly combined, conspired, and agreed to:

- a. knowingly steal and without authorization appropriate, take, carry away, and conceal, and by fraud, artifice, and deception obtain trade secrets belonging to Micron; and
- b. knowingly and without authorization copy, duplicate, sketch, draw, photograph, download, upload, alter, destroy, photocopy, replicate, transmit, deliver, send, mail, communicate, and convey trade secrets belonging to Micron; and
- c. knowingly receive, buy, and possess trade secrets belonging to Micron, knowing the same to have been stolen, appropriated, obtained, and converted without authorization; intending and knowing that the offenses would benefit a foreign government, namely the PRC, and a foreign instrumentality, namely Jinhua.

## Manner and Means of the Conspiracy

- 18. In order to develop DRAM technology and production capabilities without investing years of research and development and the expenditure of many millions of dollars, UMC and Jinhua, a company entirely funded by the PRC government, and employees of both, conspired to circumvent Micron's restrictions on its proprietary technology and illegally obtain DRAM technology that had been developed by Micron, including Trade Secrets 1 through 8.
- 19. In or around February 2016, the PRC formed and funded Jinhua for the purpose of developing, designing, and mass-producing advanced DRAM technology. The PRC prioritized the development of integrated circuit devices, which included DRAM, in its 13<sup>th</sup> Five-Year Plan, a national plan that included objectives for China's economic priorities for the years 2016-2020, ratified by the

National People's Congress, and which established the Chinese Communist Party's vision for the country's future developments.

- 20. In or around January 2016, Jinhua and UMC negotiated and later entered into a technology cooperation agreement whereby, with funding from Jinhua, UMC would develop DRAM technology, transfer the technology to Jinhua, and Jinhua would mass produce DRAM.
- 21. In the years leading up to the technology cooperation agreement, UMC did not have advanced DRAM technology and had not been producing DRAM. UMC, however, had intentions to take over DRAM business in China.
- 22. In September 2015, UMC hired Chen, who was previously the President of MMT and the site director of MMT's Fabrication Facility 16 in charge of producing Micron's 25nm DRAM product, to be the Senior Vice President of UMC. In January 2016, UMC established the NBD division for developing DRAM technology to transfer to Jinhua and placed Chen in charge of the NBD division.
- 23. From in or around October 2015 through April 2016, Chen recruited and hired several MMT employees to work for UMC, including Ho and Wang, among others.
- In or around November 2015, Chen hired Ho to work for UMC. Prior to leaving MMT, Ho stole confidential and proprietary materials belonging to Micron, including trade secrets pertaining to the prior, current, and future generations of Micron's DRAM technology, including the 80 (30nm), 90 (25nm), 100 (20nm), and 110 (1Xnm) series DRAM. Ho referenced the stolen Micron materials to support UMC's design of the F32nm DRAM technology for transfer to Jinhua pursuant to the two companies' technology transfer agreement. Ho stored the stolen Micron trade secrets, including Trade Secrets 1, 6, 7, and 8 on one or more digital devices belonging to UMC.
- 25. Between in or around December 2015 and April 2016, Ho communicated with his former colleague Wang, who was still working at MMT. Wang provided Ho with confidential and proprietary Micron information to further UMC's F32nm DRAM technology design, including information related to Micron's wafer specifications for its 25nm DRAM chip.
- 26. On April 26, 2016, Wang left MMT's employment. During Wang's exit interview from MMT, Wang told MMT that he was leaving to work at his family business, and he signed the MMT Declaration of Resignation, declaring and certifying that he did not keep any documents, confidential or

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otherwise, belonging to the company, and that he destroyed any hard copy or electronic form in his possession or control that were stored on non-Micron property, including computers, phone, personal email, or file sharing accounts.

- 27. Wang did not leave to work for his family business but rather immediately began working for UMC.
- 28. In the weeks leading up to Wang's resignation from MMT, he downloaded over 900 confidential and proprietary files belonging to Micron, including Trade Secrets 1-8, by downloading the files from Micron servers and transferring them to USB external storage devices or uploading the files to his personal Google Cloud account stored on servers in the United States. Many of the files were marked "Micron Confidential," "Micron Technology, Inc., Confidential and Proprietary," or "Micron Confidential/Do Not Duplicate." The created dates in the Google files metadata showed that Wang accessed Micron confidential and proprietary files both before and after he left Micron employment, and while working at UMC.
- 29. In the weeks leading up to Wang's resignation from MMT, Wang ran numerous deletion processes and a CCleaner program on his laptop computer to mask his theft of Micron trade secrets. He also conducted numerous internet searches, accessing a number of publicly available news articles about the PRC government's support of the growth of the DRAM business in the PRC, and specifically on UMC and Jinhua's cooperation toward creating and producing DRAM.
- 30. While working at UMC, Wang referenced Micron trade secrets to assist and further UMC's development of its F32nm DRAM technology. In or around July or August 2016, Wang, at the direction of a UMC employee, referenced Micron's Trade Secret 5 and provided critical design rule data to that employee to further UMC's development of its F32nm DRAM technology, knowing that UMC would transfer the technology to Jinhua. Wang used his UMC-assigned laptop to access his Google Drive, download a copy of Trade Secret 5, and reference the data contained therein to assist UMC with its F32nm DRAM design rule. UMC employees were directed to use the information Wang provided to complete UMC's F32nm DRAM design rule. Trade Secret 5 and UMC's F32nm DRAM design rule were stored in Wang's Google Drive, and a comparison of the two show Micron's information being used in UMC's F32nm DRAM design rule document.

- attended a Jinhua/UMC recruiting fair in the Northern District of California to recruit employees from the United States with semi-conductor experience to work for both companies in either the research and development or sales and marketing division. Chen stated at the recruiting fair that UMC had transferred its 25nm DRAM chip to Jinhua. On or about October 24, 2016, Chen and others from UMC and Jinhua, including the mayors from the PRC cities of Jinjiang and Quanzhou, also visited several semiconductor equipment-manufacturing companies in the Northern District of California to facilitate its DRAM production process. While at the recruiting fair and visiting the equipment-manufacturing companies in the Northern District of California, Chen, UMC, and Jinhua had obtained and were in continuous control of the stolen Micron trade secrets.
- 32. From in or around September 2016 through March 2017, UMC and Jinhua filed five patents and a patent application concerning DRAM technology that contained information that was the same or very similar to technology described in Micron's Trade Secrets 2 and 6. Ho was listed as an inventor in each of the five patents and the patent application. The information contained in the patents and patent application contained Micron trade secrets that could not be obtained through reverse engineering.
- 33. In February 2017, Taiwan law enforcement authorities executed search warrants and seized items from UMC's offices and Ho's and Wang's residences. They found electronic and hard copy files containing Micron trade secrets in areas and on devices associated with UMC and belonging to Ho and Wang. Knowing that Taiwan law enforcement was on its way to execute search warrants at UMC, a UMC employee directed both Ho and Wang to remove any electronic devices they possessed that contained Micron information on them. Some of the electronic devices that contained Micron information were turned over to Taiwan law enforcement. At least one electronic device that contained Micron information was not turned over to Taiwan law enforcement and had been concealed by UMC and Chen.
- 34. In or around February 2017, in addition to his position at UMC, Chen assumed the post of President of Jinhua.

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#### Overt Acts

- 35. Between in or about October 2015 and April 2016, Chen recruited Micron employees Ho and Wang to work at UMC to develop F32nm DRAM technology.
- 36. In or around January 2016, UMC entered a technology cooperation agreement to develop and transfer F32nm DRAM technology to Jinhua, a state-owned enterprise of the People's Republic of China.
- 37. In or around October 2015, Ho stole Micron trade secrets, including Trade Secret 1 and files identified as Trade Secrets 6, 7, and 8, and brought them with him to UMC. In or around December 2015, Ho saved files identified as Trade Secrets 6, 7, and 8 onto his UMC laptop.
- 38. In or around December 2015, Ho obtained from Chen a UMC company laptop with USB capability in order to access confidential and proprietary Micron materials in support of the UMC F32nm DRAM project.
- 39. On or about February 28, 2016, Wang downloaded Trade Secret 5 from Micron servers. On or about May 4, 2016 and June 29, 2016, Wang uploaded Trade Secret 5 to his BRH5476 Google Cloud Account.
- 40. On or about April 23, 2016, Wang downloaded Trade Secrets 2, 3, and 4 from his Micron company laptop and uploaded Trade Secrets 2, 3, and 4 to his BRH5476 Google Cloud Account.
- 41. On or about April 23, 2016, Wang downloaded Trade Secret 6 from Micron servers. On or about April 23, 2016 and October 23, 2016, Wang uploaded Trade Secret 6 to his BRH5476 Google Cloud Account.
- 42. On or about May 22, 2016, Wang emailed Trade Secret 5 from his BRH5476 Gmail Account to his UMC email account.
- 43. In or around July or August 2016, Wang used stolen Micron trade secret material contained in Trade Secret 5 to assist UMC with its design of the F32nm DRAM product. Information from Trade Secret 5 was put into UMC's document titled: UMC 32nm DRAM Process Topological Layout Rule Version 0.1, Phase 3 (Revision History Approved Date August 1, 2016).
- 44. On or about October 10, 2016, Wang uploaded Trade Secrets 7 and 8 to his BRH5476 Google Cloud Account.

- 45. On or about October 18, 2016, UMC and Jinhua filed a patent application (with corresponding Patent No. 9,679,901 B1) in the United States Patent and Trademark Office, which claimed priority to a Chinese patent application filed on September 22, 2016. Ho was listed as a named inventor on the patent application. The disclosures and inventions described in the patent application were based on or derived from misappropriated proprietary Micron materials identified in Trade Secrets 2 and 6. On June 13, 2017, the United States Patent and Trademark Office issued patent 9,679,901 B1 to UMC and Jinhua.
- On or about October 23, 2016, UMC, Jinhua, and Chen, after having obtained Micron 46. trade secrets and being in continuous control over them, arranged and coordinated a UMC/Jinhua recruiting event in the Northern District of California to recruit employees from the United States with semi-conductor experience to work for UMC/Jinhua. PRC government officials attended the event to show support for the companies. Chen announced at the recruiting event that UMC had transferred the F32nm DRAM design technology to Jinhua.
- On or about October 24, 2016, UMC, Jinhua, Chen, and government officials from the 47. PRC visited Applied Materials, Lam Research, and KLA Tencor, semiconductor equipmentmanufacturing companies in the Northern District of California, to facilitate and further its DRAM production process.
- In February 2017, a UMC employee directed Ho and Wang to remove and hide electronic 48. devices containing Micron information from Taiwan law enforcement who were going to search UMC's offices.
- Sometime after February 2017, UMC and Chen concealed at least one electronic device 49. containing misappropriated Micron materials from Taiwan law enforcement.

All in violation of Title 18, United States Code, Section 1831(a)(5).

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All in violation of Title 18, United States Code, Section 1832(a)(5).

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1	United States Code, Section 1831(a)(2).
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3	COUNT SIX: (18 U.S.C. § 1832 (a)(1) - Theft of Trade Secrets)
4	60. The allegations contained in Paragraphs 1 through 49 are re-alleged.
5	61. In or about October 2015, in the Northern District of California and elsewhere, defendant
6	HE JIANTING, a.k.a. J.T. HO,
7	intending to convert a trade secret to the economic benefit of someone other than Micron, and intending
8	and knowing that the offense would injure Micron, knowingly stole and without authorization
9	appropriated, took, carried away, concealed, and by fraud, artifice and deception obtained Trade Secrets
0	1, 6, 7, and 8, related to a product and service used in and intended for use in interstate and foreign
11	commerce, in violation of Title 18, United States Code, Section 1832(a)(1).
12	COLDY GRANT (10 Y G C 00 1001/ )/2) and 0 Francis Francis (Benefiting and Benegating
13	COUNT SEVEN: (18 U.S.C. §§ 1831(a)(3) and 2 – Economic Espionage (Receiving and Possessing Stolen Trade Secrets))
۱4	62. The allegations contained in Paragraphs 1 through 49 are re-alleged.
15	63. From in or about February 2016 to the present, in the Northern District of California and
16	elsewhere, defendants,
۱7	ADVITED A GODORY ECTONICS CORDOR ATION
18	UNITED MICROELECTONICS CORPORATION, FUJIAN JINHUA INTEGRATED CIRCUIT, CO., LTD.,
19	CHEN ZHENGKUN, a.k.a. STEPHEN CHEN, HE JIANTING, a.k.a. J.T. HO, and
20	WANG YUNGMING, a.k.a. KENNY WANG,
21	intending and knowing that they would benefit a foreign government, foreign instrumentality, and
22	foreign agent, knowingly received, bought, and possessed Trade Secrets 1 through 8, knowing them to
23	have been stolen and appropriated, obtained, and converted without authorization, in violation of Title
24	18, United States Code, Sections 1831(a)(3) and 2.
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#### CRIMINAL FORFEITURE ALLEGATION: 1 The allegations contained in Counts One through Seven of this Indictment are hereby 2 64. realleged and incorporated by reference for the purpose of alleging forfeiture pursuant to 18 U.S.C. 3 4 § 2323(b). As a result of their conviction on one or more of the felony offenses set forth in Counts 5 65. 6 One through Seven of this Indictment, defendants, 7 UNITED MICROELECTONICS CORPORATION, FUJIAN JINHUA INTEGRATED CIRCUIT, CO., LTD., 8 CHEN ZHENGKUN, a.k.a. STEPHEN CHEN, 9 HE JIANTING, a.k.a. J.T. HO, WANG YUNGMING, and a.k.a. KENNY WANG, 10 shall forfeit the following property, real or personal, to the United States: 11 Any article, the making or trafficking of which, is prohibited under 18 U.S.C. Chapter 90; 12 (1) Any property used, or intended to be used, in any manner or part to commit or facilitate a 13 (2) violation of 18 U.S.C. Chapter 90; and 14 Any property constituting or derived from any proceeds obtained directly or indirectly as 15 (3) a result of a violation of 18 U.S.C. Chapter 90. 16 If any of the property described above, as a result of any act or omission of the defendant: 17 66. cannot be located upon exercise of due diligence; 18 a. has been placed beyond the jurisdiction of the Court; 19 b. has been transferred or sold to, or deposited with a third party; 20 c. has been substantially diminished in value; or 21 d. has been commingled with other property which cannot be divided without difficulty; 22 e. 23 /// 24 /// 25 /// 26

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1	the United States of America shall be entitled to forfeiture of substitute property pursuant to Title			
2	21, United States Code, Section 853(p), all pursuant to Title 18, United States Code, Section 2323(b).			
3				
4	DATED: Dept. 21, 2018 A TRUE BILL.			
5				
6	Linda Hor			
7	FORÉPERSON San Francisco Grand Jury No. 17-3			
8				
9	ALEX G. TSE United States Attorney			
10	R 11/4 :			
11	BARBARA VALLIERE			
12	Chief, Criminal Division			
13	Approved as to form:			
14	JOHN H HEMANN Deputy Chief, Criminal Division			
15	SHIAO LEE Assistant United States Attorney			
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DEFENDANT INFORMATION RELATIVE TO	A CRIMINAL ACTION - IN U.S. DISTRICT COURT
BY: COMPLAINT INFORMATION X INDICTMENT	Name of District Court, and/or Judge/Magistrate Location
OFFENSE CHARGED SUPERSEDING	- OPFICE OF
See Attached Petty	SAN JOSE WYSO NO
Minor	DEFENDANT - U.S
Misde	- DEFENDANT - U.S - SE SILIFORNIA
□ meand  ▼ Felony  PENALTY:	4
PENALTY: Felon	DISTRICT COURT NUMBER
See Attached	CR 18 165
	011 10 465
	DEFENDANT
PROCEEDING	IS NOT IN CUSTODY
Name of Complaintant Agency, or Person (& Title, if any)	Has not been arrested, pending outcome this proceeding.  1) X If not detained give date any prior
Federal Bureau of Investigation	summons was served on above charges
person is awaiting trial in another Federal or State Court,	2)  Is a Fugitive
give name of court	Su
3	3) Is on Bail or Release from (show District)
this person/proceeding is transferred from another district	
per (circle one) FRCrp 20, 21, or 40. Show District	IC IN CUSTODY
	IS IN CUSTODY  4)  On this charge
this is a reprosecution of	4) On this charge
charges previously dismissed	5) On another conviction
which were dismissed on motion of:	Federal State
U.S. ATTORNEY DEFENSE	6) Awaiting trial on other charges  If answer to (6) is "Yes", show name of institution
	If answer to (b) is Yes , show harne or institution
this prosecution relates to a	Has detainer Yes If "Yes"
pending case involving this same defendant MAGISTRATE	hoop filed?
CASE NO.	DATE OF Month/Day/Year
prior proceedings or appearance(s)  before U.S. Magistrate regarding this	ARREST -
defendant were recorded under	Or if Arresting Agency & Warrant were not
Name and Office of Person  Furnishing Information on this form ALEX G. TSE	DATE TRANSFERRED Month/Day/Year TO U.S. CUSTODY
Furnishing Information on this form ALEX G. 1SE  V.S. Attorney Other U.S. Agency	
Name of Assistant U.S.	This report amends AO 257 previously submitted
Attorney (if assigned)  John Hemann and Shiao Lee	
PROCESS: ADDITIONAL INF	ORMATION OR COMMENTS —
SUMMONS	Bail Amount:
If Summons, complete following:	
X Arraignment X Initial Appearance	* Where defendant previously apprehended on complaint, no new summons or warrant needed, since Magistrate has scheduled arraignment
Defendant Address:	
United Microelectronics Corporation, Inc.	Date/Time: November 19, 2018 Before Judge: Duty Magistrate
Comments:	C1:30pm / 1

# PENALTY SHEET ATTACHMENT (UNITED MICROELECTRONICS CORPORATION, INC.)

## Offenses Charged

Count One: 18 U.S.C. § 1831(a)(5) - Conspiracy to Commit Economic Espionage

Count Two: 18 U.S.C. § 1832(a)(5) - Conspiracy to Commit Theft of Trade Secrets

Count Seven: 18 U.S.C. §§ 1831(a)(3) and 2 - Economic Espionage (Receiving and Possessing

Stolen Trade Secrets)

## Maximum Penalties

#### Counts One and Seven:

- A fine not more than the greater of \$10,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided;
- Restitution;
- · Asset Forfeiture; and
- \$400 special assessment

### Count Two:

- A fine not more than the greater of \$5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided;
- Restitution;
- Asset Forfeiture; and
- \$400 special assessment

Comments:

DEFENDANT INFORMATION RELATIVE TO A CRIMINAL ACTION - IN U ☐ INFORMATION ☒ INDICTMENT BY: COMPLAINT Name of District Court, and/or Judge/Magistrate Location NORTHER PROSPRIENCE CALIFORNIA SUPERSEDING OFFENSE CHARGED -SAN JOSE DWISION Petty See Attached Minor **DEFENDANT - U.S** Misde-SEAL Fujian Jinhua Integrated Circuit, Co., Ltd. meanor Felony DISTRICT COURT NUMBER PENALTY: See Attached DEFENDANT IS NOT IN CUSTODY PROCEEDING Has not been arrested, pending outcome the Name of Complaintant Agency, or Person (& Title, if any) 1) X If not detained give date any prior summons was served on above charges Federal Bureau of Investigation person is awaiting trial in another Federal or State Court, 2) Is a Fugitive give name of court 3) Is on Bail or Release from (show District) this person/proceeding is transferred from another district per (circle one) FRCrp 20, 21, or 40. Show District IS IN CUSTODY 4) On this charge this is a reprosecution of charges previously dismissed 5) On another conviction SHOW □ Federal □ State which were dismissed on motion DOCKET NO. Awaiting trial on other charges DEFENSE U.S. ATTORNEY If answer to (6) is "Yes", show name of institution this prosecution relates to a If "Yes" Has detainer Yes pending case involving this same give date been filed? defendant MAGISTRATE 1 No filed CASE NO. Month/Day/Year DATE OF prior proceedings or appearance(s) ARREST before U.S. Magistrate regarding this defendant were recorded under Or... if Arresting Agency & Warrant were not Month/Day/Year DATE TRANSFERRED Name and Office of Person TO U.S. CUSTODY ALEX G. TSE Furnishing Information on this form □ U.S. Attorney □ Other U.S. Agency This report amends AO 257 previously submitted Name of Assistant U.S. John Hemann and Shiao Lee Attorney (if assigned) ADDITIONAL INFORMATION OR COMMENTS -PROCESS: SUMMONS NO PROCESS\* WARRANT Bail Amount: If Summons, complete following: \* Where defendant previously apprehended on complaint, no new summons or X Arraignment X Initial Appearance warrant needed, since Magistrate has scheduled arraignment Defendant Address: Before Judge: Duty Magistrate Date/Time: November 19, 2018 Fujian Jinhua Integrated Circuit, Co., Ltd.

@ 1:30pm

# PENALTY SHEET ATTACHMENT (FUJIAN JINHUA INTEGRATED CIRCUIT, CO., LTD.)

## Offenses Charged

Count One: 18 U.S.C. § 1831(a)(5) - Conspiracy to Commit Economic Espionage

Count Two: 18 U.S.C. § 1832(a)(5) – Conspiracy to Commit Theft of Trade Secrets

Count Seven: 18 U.S.C. §§ 1831(a)(3) and 2 - Economic Espionage (Receiving and Possessing

Stolen Trade Secrets)

## **Maximum Penalties**

#### Counts One and Seven:

- A fine not more than the greater of \$10,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided;
- Restitution;
- · Asset Forfeiture; and
- \$400 special assessment

## Count Two:

- A fine not more than the greater of \$5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided;
- Restitution;
- Asset Forfeiture; and
- \$400 special assessment

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DEFENDANT INFORMATION RELATIVE TO	A CRIMINAL ACTION - IN U.S. DISTRICT COURT
BY: COMPLAINT INFORMATION INDICTMENT	Name of District Court, and/or Judge/Magistrate Location
OFFENSE CHARGED SUPERSEDING	4. 0
	SAN JOSE ENVISION, 2018
See Attached Petty	SANICTPICTS
Minor	DEFENDANT - U.S
Misde- meanor	A
X Felony	DISTRICT COURT NUMBER
PENALTY: See Attached	CR 18 465
CALIFIER SEA	DEFENDANT
	IS NOT IN CUSTODY
PROCEEDING	Has not been arrested, pending outcome this proceeding.
Name of Complaintant Agency, or Person (& Title, if any)	1) X If not detained give date any prior summons was served on above charges
Federal Bureau of Investigation	Summons was served on above onlyes y
person is awaiting trial in another Federal or State Court, give name of court	2) Is a Fugitive
— give hame of court	3) Son Bail or Release from (show District)
	o) in some of the same of the
this person/proceeding is transferred from another district	
per (circle one) FRCrp 20, 21, or 40. Show District	IS IN CUSTODY
	4) On this charge
this is a reprosecution of	
charges previously dismissed	5) On another conviction
which were dismissed on motion of:	
U.S. ATTORNEY DEFENSE	6) Awaiting trial on other charges  If answer to (6) is "Yes", show name of institution
	If answer to (b) is Tes , show frame of institution
this prosecution relates to a	Has detainer Yes If "Yes"
pending case involving this same defendant MAGISTRATE	been filed? No Silve date
CASE NO.	DATE OF Month/Day/Year
prior proceedings or appearance(s)  before U.S. Magistrate regarding this	ARREST
defendant were recorded under	Or if Arresting Agency & Warrant were not
Name and Office of Person	DATE TRANSFERRED Month/Day/Year
Furnishing Information on this formALEX G. TSE	TO U.S. CUSTODY 7
▼ U.S. Attorney  ☐ Other U.S. Agency	
Name of Assistant U.S. Attorney (if assigned)  John Hemann and Shiao Lee	This report amends AO 257 previously submitted
	DRMATION OR COMMENTS —
PROCESS:	B. II America
SUMMONS □ NO PROCESS* □ WARRANT	Bail Amount:
If Summons, complete following:  ☐ Arraignment ☐ Initial Appearance	* Where defendant previously apprehended on complaint, no new summons or
Defendant Address:	warrant needed, since Magistrate has scheduled arraignment
CHEN ZHENGKUN a.k.a. STEPHEN CHEN	Date/Time: November 19, 2018 Before Judge: Duty Magistrate
Comments:	P 1:350m

## PENALTY SHEET ATTACHMENT (CHEN ZHENGKUN, a.k.a. STEPHEN CHEN)

## Offenses Charged

Count One: 18 U.S.C. § 1831(a)(5) - Conspiracy to Commit Economic Espionage

Count Two: 18 U.S.C. § 1832(a)(5) - Conspiracy to Commit Theft of Trade Secrets

Count Seven: 18 U.S.C. §§ 1831(a)(3) and 2 - Economic Espionage (Receiving and Possessing

Stolen Trade Secrets)

## **Maximum Penalties**

### Counts One and Seven:

• \$5,000,000 fine or twice the gross gain or loss

- 15 years imprisonment
- 3 years supervised release
- \$100 special assessment
- Restitution
- Forfeiture

### Count Two:

- \$250,000 fine or twice the gross gain or loss
- 10 years imprisonment
- 3 years supervised release
- \$100 special assessment
- Restitution
- Forfeiture

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HU.	231	(Rev.	0110	١

FILED Alle

DEFENDANT INFORMATION RELATIVE TO	A CRIMINAL ACTION - IN U.S. DISTRICT COURT
BY: COMPLAINT INFORMATION INDICTMENT	Name of District Court, and/or Judge/wagering Augustion  NORTHERN DISTRICT OF CACLE BY 1997
OFFENSE CHARGED	SAN JOSE DIVISION
See Attached Petty	
Minor	DEFENDANT - U.S
Misdemeand	HE JIANTING a.k.a. J.T. HO
PENALTY: See Attached See Attached	CRISTRICT COURTNUMBER 465
	DEFENDANT
PROCEEDING	IS NOT IN CUSTODY
Name of Complaintant Agency, or Person (& Title, if any)	Has not been arrested, pending outcome this proceeding.  1) If not detained give date any prior summons was served on above charges
Federal Bureau of Investigation	
person is awaiting trial in another Federal or State Court, give name of court	2) Is a Fugitive
	3) Is on Bail or Release from (show District)
this person/proceeding is transferred from another district per (circle one) FRCrp 20, 21, or 40. Show District	IS IN CUSTODY  4)  On this charge
this is a reprosecution of charges previously dismissed which were dismissed on motion of:  U.S. ATTORNEY DEFENSE	5) On another conviction Federal State  6) Awaiting trial on other charges  If answer to (6) is "Yes", show name of institution
this prosecution relates to a pending case involving this same defendant MAGISTRATE CASE NO.	Has detainer  Yes  If "Yes" give date filed  DATE OF  Month/Day/Year
prior proceedings or appearance(s) before U.S. Magistrate regarding this defendant were recorded under	ARREST Or if Arresting Agency & Warrant were not
Name and Office of Person	DATE TRANSFERRED Month/Day/Year
Furnishing Information on this form ALEX G. TSE	TO U.S. CUSTODY
☑ U.S. Attorney ☐ Other U.S. Agency	
Name of Assistant U.S. Attorney (if assigned)  John Hemann and Shiao Lee	This report amends AO 257 previously submitted
PROCESS: ADDITIONAL INF	ORMATION OR COMMENTS ————————————————————————————————————
PROCESS.	Bail Amount:
If Summons, complete following:	* Where defendant previously apprehended on complaint, no new summons or
	warrant needed, since Magistrate has scheduled arraignment
Defendant Address:	Date/Time: November 19, 2018 Before Judge: Duty Magistrate
HE JIANTING a.k.a. J.T. HO	O 1:30 PM
Comments:	

## PENALTY SHEET ATTACHMENT (HE JIANTING a.k.a. J.T. HO)

## Offenses Charged

Count One: 18 U.S.C. § 1831(a)(5) - Conspiracy to Commit Economic Espionage

Count Two: 18 U.S.C. § 1832(a)(5) - Conspiracy to Commit Theft of Trade Secrets

Count Five: 18 U.S.C. § 1831(a)(2) - Economic Espionage (Copying and Conveying Trade

Secrets)

Count Six: 18 U.S.C. § 1832(a)(1) - Theft of Trade Secrets

Count Seven: 18 U.S.C. §§ 1831(a)(3) and 2 - Economic Espionage (Receiving and Possessing

Stolen Trade Secrets)

## **Maximum Penalties**

Counts One, Five, and Seven:

- \$5,000,000 fine or twice the gross gain or loss
- 15 years imprisonment
- 3 years supervised release
- \$100 special assessment
- Restitution
- Forfeiture

## Counts Two and Six:

- \$250,000 fine or twice the gross gain or loss
- 10 years imprisonment
- 3 years supervised release
- \$100 special assessment
- Restitution
- Forfeiture

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DEFENDANT INFORMATION RELATIVE TO A CRIMINAL ACTION - IN U.S. DIS BY: COMPLAINT INFORMATION Name of District Court, and/or Judge/Magistrate Location NORTHERN DISTRICE CALIFORNIA SUPERSEDING OFFENSE CHARGED -SAN JOSE DIVISIONS Petty See Attached Minor DEFENDANT - U.S -Misde-WANG YUNGMING a.k.a. KENNY WANG meanor Felony DISTRICT COURT NUMBER PENALTY: ien seal See Attached DEFENDANT IS NOT IN CUSTODY **PROCEEDING** Has not been arrested, pending outcome this proceeding. Name of Complaintant Agency, or Person (& Title, if any) 1) X If not detained give date any prior summons was served on above charges Federal Bureau of Investigation person is awaiting trial in another Federal or State Court, 2) Is a Fugitive give name of court 3) Is on Bail or Release from (show District) this person/proceeding is transferred from another district per (circle one) FRCrp 20, 21, or 40. Show District IS IN CUSTODY 4) On this charge this is a reprosecution of 5) On another conviction charges previously dismissed SHOW Federal State which were dismissed on motion DOCKET NO. Awaiting trial on other charges U.S. ATTORNEY DEFENSE If answer to (6) is "Yes", show name of institution this prosecution relates to a If "Yes" Has detainer \( \subseteq \text{Yes} \cdot \) pending case involving this same give date been filed? **MAGISTRATE** defendant filed CASE NO. Month/Day/Year DATE OF prior proceedings or appearance(s) ARREST before U.S. Magistrate regarding this Or... if Arresting Agency & Warrant were not defendant were recorded under Month/Day/Year DATE TRANSFERRED Name and Office of Person TO U.S. CUSTODY ALEX G. TSE Furnishing Information on this form ☑ U.S. Attorney ☐ Other U.S. Agency This report amends AO 257 previously submitted Name of Assistant U.S. John Hemann and Shiao Lee Attorney (if assigned) - ADDITIONAL INFORMATION OR COMMENTS -PROCESS: SUMMONS NO PROCESS\* WARRANT Bail Amount: If Summons, complete following: \* Where defendant previously apprehended on complaint, no new summons or Arraignment X Initial Appearance warrant needed, since Magistrate has scheduled arraignment Defendant Address: Before Judge: Duty Magistrate -Date/Time: November 19, 2018 WANG YUNGMING a.k.a. KENNY WANG Comments:

## PENALTY SHEET ATTACHMENT (WANG YUNGMING a.k.a. KENNY WANG)

## Offenses Charged

Count One: 18 U.S.C. § 1831(a)(5) - Conspiracy to Commit Economic Espionage

Count Two: 18 U.S.C. § 1832(a)(5) - Conspiracy to Commit Theft of Trade Secrets

Count Three: 18 U.S.C. § 1831(a)(1) - Economic Espionage (Theft of Trade Secrets)

Count Four: 18 U.S.C. § 1831(a)(2) - Economic Espionage (Copying and Conveying Trade

Secrets)

Count Seven: 18 U.S.C. §§ 1831(a)(3) and 2 - Economic Espionage (Receiving and Possessing

Stolen Trade Secrets)

## **Maximum Penalties**

Counts One, Three, Four, and Seven:

- \$5,000,000 fine or twice the gross gain or loss
- 15 years imprisonment
- 3 years supervised release
- \$100 special assessment
- Restitution
- Forfeiture

## Count Two:

- \$250,000 fine or twice the gross gain or loss
- 10 years imprisonment
- 3 years supervised release
- \$100 special assessment
- Restitution
- Forfeiture



## UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA

FILED

SEP 27 2018

CRIMINAL COVER SHEET

Instructions: Effective November 1, 2016, this Criminal Cover Sheet must be completed and submitted, along with the Defendant Information Form, for each new criminal case.

CASE NAME:

CASE NUMBER:

USA V. JUNITED MICROELECTONICS CORPORATION, et al.

No

Total Number of Defendants:

Is This Case Under Seal?

Five

Does this case involve ONLY charges under 8 U.S.C. § 1325 and/or 1326?

No

Venue (Per Crim. L.R. 18-1):

San Jose

Is this a potential high-cost case?

No

Is any defendant charged with a death-penalty-eligible crime?

No

Is this a RICO Act gang case?

No

**Assigned AUSA** 

(Lead Attorney): Shiao C. Lee

**Date Submitted: 9/27/2018** 

Comments: